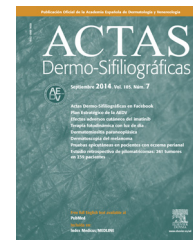


# ACTAS Derma-Sifiliográficas

Full English text available at  
[www.actasdermo.org](http://www.actasdermo.org)



## REVIEW

# Allergic Contact Dermatitis Caused by Cosmetic Products<sup>☆</sup>



P. González-Muñoz,<sup>a,\*</sup> L. Conde-Salazar,<sup>b</sup> S. Vañó-Galván<sup>a</sup>

<sup>a</sup> Servicio Dermatología, Hospital Ramón y Cajal, Madrid, Spain

<sup>b</sup> Servicio Dermatología, Escuela Nacional de Medicina del Trabajo, Instituto de Salud Carlos III, Madrid, Spain

Received 19 May 2013; accepted 1 December 2013

Available online 22 September 2014

### KEYWORDS

Cosmetics;  
Allergic contact  
dermatitis;  
Fragrances;  
Preservatives;  
Hair dye;  
Sunscreen

### PALABRAS CLAVE

Cosméticos;  
Eccema alérgico de  
contacto;  
Fragancias;  
Conservantes;  
Tintes capilares;  
Fotoprotectores

**Abstract** Contact dermatitis due to cosmetic products is a common dermatologic complaint that considerably affects the patient's quality of life. Diagnosis, treatment, and preventive strategies represent a substantial cost. This condition accounts for 2% to 4% of all visits to the dermatologist, and approximately 60% of cases are allergic in origin. Most cases are caused by skin hygiene and moisturizing products, followed by cosmetic hair and nail products. Fragrances are the most common cause of allergy to cosmetics, followed by preservatives and hair dyes; however, all components, including natural ingredients, should be considered potential sensitizers. We provide relevant information on the most frequent allergens in cosmetic products, namely, fragrances, preservatives, antioxidants, excipients, surfactants, humectants, emulsifiers, natural ingredients, hair dyes, sunscreens, and nail cosmetics.

© 2013 Elsevier España, S.L.U. and AEDV. All rights reserved.

### Dermatitis alérgica de contacto a cosméticos

**Resumen** La dermatitis de contacto por cosméticos es un problema dermatológico frecuente, creciente, con un gran impacto en la calidad de vida de los pacientes que lo padecen y con un importante coste invertido en la búsqueda de estrategias diagnósticas, terapéuticas y de prevención. Su prevalencia se ha estimado entre el 2 y el 4% de las consultas dermatológicas, y aproximadamente el 60% de los casos son de causa alérgica. Los productos de higiene e hidratación cutánea son los responsables de la mayoría de los casos, seguidos de los cosméticos ungueales y capilares. Las fragancias son la causa más frecuente de alergia a cosméticos, seguidos de los conservantes y los tintes capilares; pero todos los componentes, incluyendo los ingredientes naturales, deben ser considerados como potenciales sensibilizantes. A lo largo de este trabajo se detallarán los datos relevantes de los alérgenos más frecuentes de los productos cosméticos: fragancias, conservantes, antioxidantes, excipientes, surfactantes,

<sup>☆</sup> Please cite this article as: González-Muñoz P, Conde-Salazar L, Vañó-Galván S. Dermatitis alérgica de contacto a cosméticos. Actas Dermosifiliogr. 2014;105:822–832.

\* Corresponding author.

E-mail address: [patrihrc@gmail.com](mailto:patrihrc@gmail.com) (P. González-Muñoz).

humectantes y emulsificantes, ingredientes naturales, tintes capilares, fotoprotectores y cosméticos ungueales.

© 2013 Elsevier España, S.L.U. y AEDV. Todos los derechos reservados.

## Introduction

European legislation defines a cosmetic as a substance or mixture of substances for application to external surfaces of the human body (epidermis, hair, lips, and external genitalia), teeth, or mucosa of the oral cavity with the only or principle aim of cleaning, perfuming, or modifying its appearance, and/or masking body odors. Personal hygiene products (e.g. gels and soaps) and moisturizers (e.g. creams and lotions), hair care products (e.g. shampoos and hair dyes), toothpaste, make-up, nail products (e.g. nail polish and artificial nails), fragrances (e.g. deodorants and perfumes), hair removal products, and sunscreens are all included within this definition. These cosmetics can be classified as stay-on or leave-on, that is, they remain in contact with the skin surface, or rinse-off or wash-off, that is, they are removed with water after a few minutes.<sup>1</sup>

## Epidemiology

Cosmetic contact dermatitis accounts for between 2% and 4% of visits to the dermatologist,<sup>2</sup> although this figure probably underestimates the true prevalence because most of the patients with mild contact eczema do not seek specialist attention and simply avoid the cosmetic suspected to be responsible.<sup>3,4</sup> Approximately 17% of patients who undergo patch testing in a skin allergy unit have lesions consistent with potential sensitization to cosmetics, with 59.04% testing positive in at least one test, and with a higher prevalence among women than men.<sup>5</sup> Skin hygiene products and moisturizers are the cause of most cases of contact dermatitis, followed by make-up, and hair and nail products.<sup>6-8</sup>

## Clinical Characteristics

The clinical manifestations of cosmetic contact dermatitis depend on several factors such as the product used, the site of application, frequency of use, duration of contact, and certain individual patient characteristics.<sup>9,10</sup> The facial region is the most frequent site for contact dermatitis, with the eyelids being particularly affected (Figs. 1 and 2).<sup>9</sup>

## Main Allergens

Identification of the allergens responsible for cosmetic allergic contact dermatitis (ACD) took on particular importance from 1997 onwards, when the chemical composition had to be included by law on the label for cosmetics.<sup>2</sup>

Fragrances are the most common cause of allergies to cosmetics,<sup>5,7,9-12</sup> followed by preservatives and hair dyes.<sup>2,5,7-10</sup> Approximately half the positive tests are detected using a standard test battery,<sup>2,13</sup> and



**Figure 1** Mild allergic contact eczema of the eyelids after application of a cosmetic product.



**Figure 2** Chronic lichenified eczema of the eyelids caused by cocamidopropyl betaine present in a cosmetic.

of the allergens included in these batteries, Kathon CG (methylchloroisothiazolinone/isothiazolinone) and para-phenylenediamine (PPD) are the most prevalent.<sup>2,5</sup>

When a cosmetic is suspected of being responsible for contact dermatitis, and with a view to improving diagnostic yield, it is important to extend the battery with products used by the patient, as it is estimated that 15% of patients test positive to at least one of their own cosmetics.<sup>14</sup>

Below, we will detail the most relevant information on the most common allergens. First, we will present the allergens found in many cosmetics (fragrances, preservatives, antioxidants, excipients, emulsifiers, wetting agents, surfactants, and natural ingredients) and then those specific to certain categories (hair dyes, sunscreens, and nail cosmetics).

Download English Version:

<https://daneshyari.com/en/article/3182635>

Download Persian Version:

<https://daneshyari.com/article/3182635>

[Daneshyari.com](https://daneshyari.com)